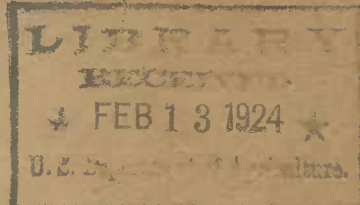


Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

62.79



Spring 1910

Some New Fruits

Originated by N. E. Hansen in the Fruit-Breeding Laboratory of the South
Dakota Agricultural Experiment Station

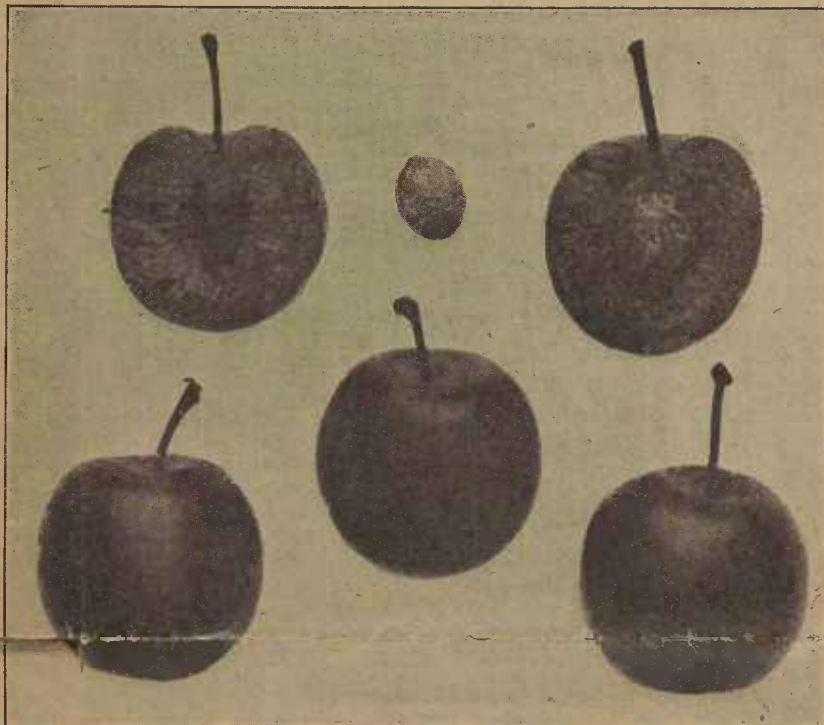
and

Some New Alfalfas

Found in Northern Eurasia by

N. E. HANSEN

Professor of Horticulture in the South Dakota State College of Agriculture and Mechanic Arts, and Agricultural Explorer for the United States
Department of Agriculture.



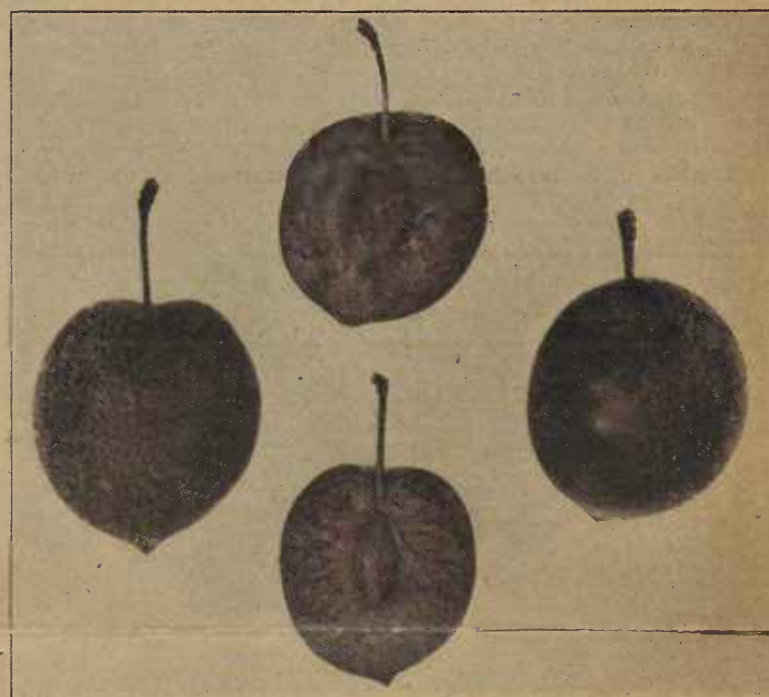
OPATA. ✓

Opata (Sioux Indian for "boquet"). First sent out in spring of 1908. The restrictions as to propagation are now removed as it promises to be a great acquisition. One year old trees sent to many places when first introduced bore freely the following year. Female parent, Dakota Sandcherry (*Prunus Besseyi*); male parent, the Gold Plum, a very large hybrid Japanese plum originated by Luther Burbank. Opata is a vigorous plum tree in habit with large glossy foliage. Forms fruit buds freely on one year old shoots in nursery. Fruit, 1 and 3-16 inch diameter, dark purplish-red with blue bloom, flesh green, flavor a mingling of the sprightliness of the sand cherry with the rich sweetness of the Gold plum, quality delicious, skin thin and free from acidity, pit very small, season extremely early. Stock limited, consisting of 147 two year transplanted trees and 46 one year buds. Price \$1.00 each.

Scions for grafting, 5 feet for \$1.00; 50 feet or more, 8 cents per foot. Total stock of scions, 2481 feet.

Scions are intended mainly for expert nurserymen, as in the hands of amateurs they will usually give disappointment only.

Special Note—To give these Sioux Indian names their native melody, pronounce the vowel A with the long Italian A, as in "arm."



SANSOTO AND CHERESOTO. ✓

(Hybrids of Sand Cherry and De Soto Plum).

Female parent sand cherry, (*Prunus Besseyi*); male parent De Soto, a well known standard variety of native plum (*Prunus Americana*) from southwestern Wisconsin. In the fall of 1907 thirteen of my seedlings of this pedigree were under propagation in the station nursery. All these trees made strong growth in the nursery, some five feet in height, stocky, well branched and formed abundant fruit buds the first year. These seedlings have borne heavily the past season and some of them combined the bad qualities of both parents in quality of fruit and large size of pit. However, others show promise of value as a late market plum as they fruited heavily here this year when native plums were almost a total failure.

Two of them will now be named, Sansoto and Cheresoto (made up from the words sand cherry and De Soto). The fruit is shown in cut herewith. The fruit of Sansoto is round while that of Cheresoto is longish with a minute bristle or prickle at apex which it no doubt inherits from the sand cherry. The varieties are much alike in fruit but differ somewhat in shape. The size is about one and three-eighths inch in diameter; color black when fully ripe, with blue bloom; flesh cling, yellowish green, sprightly, pleasant; skin

thin and free from acerbity. The fruit is a perfect mingling of the sand cherry and De Soto in looks and flavor, having the size of the De Soto and the color of the sand cherry. The habit is that of a vigorous plum tree.



SANSOTO.

These sand cherry hybrids appear to be all later in bloom than the plum, which is characteristic of the sand cherry. The fruit the past season was all raised on one year old trees set in the spring of 1908, hence three seasons growth from bud.

No trees are ready for this spring. Scions only are offered for spring. Prices of Sansoto or Cheresoto 10 feet for \$1.00; 100 feet or more 5 cents per foot.

Total stock of Sansoto 2312 feet; Cheresoto (not yet cut) about 2000 feet.

THREE NEW HYBRIDS.

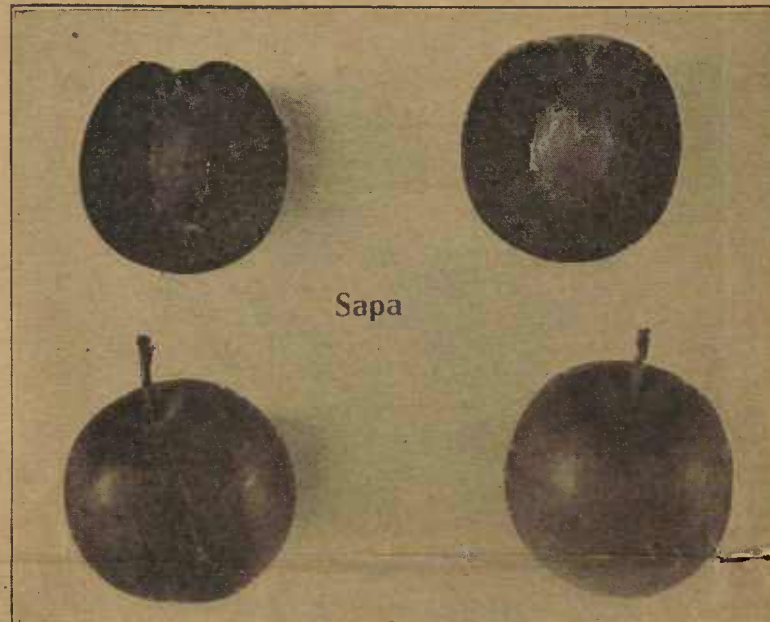
Wild Plum x Chinese Apricot—Hanska, Inkpa, Kaga.



HANSKA.

Fruit of this variety exhibited at the South Dakota State Fair the past three years has been much admired for its beautiful color, (bright red with heavy blue bloom), firm flesh, good quality and rich fragrance. Fruit this year 1 and 1-2 to 1 and 9-16 inches in diameter. When cooked the strong apricot flavor is brought out to perfection, entirely unlike any native plum. The female parent is a seedling of our wild northwestern plum (*Prunus Americana*); the male parent is the large, firm-fleshed, fragrant apricot-plum of China (*Prunus Simoni*), popular in the orchards of California. Hanska is Sioux Indian for tall, alluding to the extremely rapid growth in nursery and orchard. First introduced in spring of 1908. I have some 15 varieties of this same pedigree, all of which bore a heavy crop the past season, when the native plums were almost a total failure. They are all very much alike in character of fruit but differ somewhat in tree. Trees each, \$1.00. Total stock, 308 trees.

Inkpa and Kaga of the same pedigree as Hanska, trees same price. Total stock, Kaga 127 trees; Inkpa 145 trees. The present indications are that Hanska, Inkpa and Kaga will become standard market varieties.—Inkpa in Sioux Indian means "apex" or "acme," and Kaga is "pitch a tent."



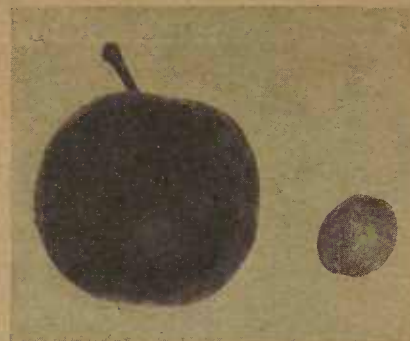
Sapa

SAPA.

(Sioux Indian word for "black"). Offered spring 1908 for the first time (see Bulletin 102). The female parent is one of our selected seedlings of the western sand cherry (*Prunus Besseyi*) (a favorite fruit of the Sioux Indians; the male parent a very large, purple-fleshed Japanese plum originated by Luther Burbank of California and by him named the Sultan. The Sultan is a plum of the Satsuma type and is perhaps a cross with some other species. The tree is plum-like in habit; one year trees in nursery have many fruit buds; the fruit has the glossy, dark purple skin, and rich dark purple-red flesh of its Japanese sire. One year trees sent out in spring of 1908 fruited freely in 1909 in many places and attracted great attention as a new departure in stone fruits for the prairie Northwest. Sapa took first prize as a seedling plum at the Minnesota State Fair in 1909. Price, one year old trees each, \$1.00. Total stock available for spring, 75 trees. Scions of Sapa, 5 feet for \$1.00, 50 feet or over, 8 cents per foot. Total stock of scions 1327 feet.

ETOPA.

First sent out as one year old trees, spring 1908. My restrictions as to propagation are now removed as it has fruited freely the past season in several places. Pedigree same as Sapa and much like it in color of skin and flesh. Mr. A. P. Stevenson of Duston, Manitoba, writes: "Etopa ripened some very fine fruit on September 12, 1909. I think a lot of this variety, it is the best yet fruited here". Only thirty trees available for spring. Price, each \$1.00.



SKUYA.

Skuya: (The Sioux Indian for "sweet"). First sent out spring 1908. Female parent Red June, a large early Japanese plum; male parent, De Soto, a well known native plum (*Prunus Americana*) originated in Southwestern Wisconsin. Fruit red and yellow, pit very small, quality excellent and delicious. Trees one year old, \$1.00. Total stock available, 63 trees.

ASSORTED HYBRID PLUMS.

A few one year trees of Wohanka, Okiya, Wakapa and Enopa (see Bulletin 102) in assortment, two for \$1.50.

WHAT SHALL WE DO FOR HARDY CHERRIES?

This is one of my favorite problems but one still unsolved. The union of our Dakota sand cherry and the Sultan plum gives us Sapa, Etopa and several others which with their rich flesh and juice and cherry-like pit will compare favorably with the purple red-fleshed sweet cherries from California. But they run too large to be rated as cherries. Shall they be called cherries or plums? Another desirable seedling of the same pedigree as the Sapa and much like it, but a stronger grower and with smaller fruit, about one inch in diameter, has proven a very heavy bearer the past season on three old trees, transplanted at one year of age. It has been named

WACHAMPA

(Sioux Indian for "blood cherry"). Total stock of transplanted trees, 38 trees, each \$1.00. Scions; 5 feet for \$1.00, 100 feet or over 6 cents per foot; available stock 1911 feet.

CISTENA PURPLE LEAF SAND CHERRY.

An event for Landscape Gardeners.

Cistena (the Sioux Indian name for "baby"). First introduced spring 1900 as Purple A. Female parent, Dakota Sandcherry; male parent, the purple-leaved plum of Persia, *Prunus Pissardi*. A beautiful shrub, following the Sandcherry in stature of plant and glossiness of leaf, but the foliage has the rich purple-red color which gives its Persian sire such wide popularity. In my opinion the Cistena will win great favor.

Price, transplanted plants, two years old, each \$1.00. Total stock, 105 plants.

A few trees of Purple B and Purple C, the other two of the trio of the same pedigree sent out last year, can be spared at the same price if it desired to complete the series. Cistena appears best so far as to depth of color.

CHOICE PURE NATIVE PLUMS.

New native plums.—About six thousand native plum seedlings have been fruited here and some of the best of these have been propagated for limited trial elsewhere. Three of these are available for spring

Wastesa—(Sioux Indian name for "delicious"). This is our State Fair No. 16 mentioned in my Bulletin No. 93. Large, almost free stone, excellent.

Yuteca—(Sioux Indian for "to refresh"). First sent out spring 1907 as South Dakota No. 8. Size very large, quality good. Very early.

Zekanta—(Sioux Indian for "yellow plum"). A large yellow plum, of good quality. Only a few trees of Zekanta are available.

These trees are three years old, transplanted when one year old from bud, five to six feet in assortment. \$6.00 per dozen.

HARDY STRAWBERRIES.

An immense number of strawberry seedlings have been raised at this station in the endeavor to originate a "busy farmer's berry," one that is hardy without winter mulching. These are mostly hybrids of the wild and cultivated varieties. Two of these have been sent out so far, South Dakota Nos. 1 and 2. The pressure of other work has prevented the propagating of the larger fruited varieties so I have no strawberry plants to offer for spring.



Sunbeam Raspberry.—The first of my many thousands of raspberry seedlings to be named. First sent out in the spring of 1906. Female parent, a wild red raspberry from Cavalier county, North Dakota, near the Manitoba line. Male parent, Shaffer's Colossal from New York. This variety is now being propagated extensively by nurserymen, so I will not need to continue its propagation. The numerous reports received indicate it is the hardiest red raspberry ever introduced. Worthy of trial where other varieties winter-kill as it has endured uninjured 41 degrees below zero. The few plants left will be closed out at \$2.50 per dozen.

FIVE IMPORTATIONS

Siberian Bird Cherry.

This is *Prunus Padus* as found wild in the Lake Balkal region of Eastern Siberia. An interesting ornamental tree; the fruit is used very extensively by the peasants for culinary purposes, but is not much of an improvement on our western choke-cherry, although less astringent. A few trees can be spared, grown from seed of fruit obtained by the writer in Siberia in the fall of 1908.

Price one year seedlings, three for \$1.00; Assorted from three different localities, twelve for \$3.00.

Edible Russian Mountain Ash.

While in Russia in 1906 I secured 100 trees of a mountain ash (*Sorbus edulis*) said to bear large edible fruit, used in Russia for culinary purposes. Some of these fruited true to name the past season so it is very probable that they are all true to name. The fruit is much larger than that of the common mountain ash, but must need some special cooking to make it acceptable although it has much less bitterness than that of the common mountain ash. Certainly an interesting tree and valuable at least for ornament. A few scions only can be spared. Price, 5 feet for \$1.00.

Irkutsk Siberian Crab Seedlings.

The pure Siberian crab (*Pyrus baccata*) grown from seed of trees growing wild near Irkutsk, Lake Balkal region, Eastern Siberia. An extremely hardy ornamental tree with fruit size of a pea; flowers, pink and white. Worthy of growing for ornament, but the fruit is too small for profit. In Russia seedlings of this tree are used in the nurseries as hardy stocks for the cultivated apple to prevent root-killing. Seedling trees, once transplanted, 6 to 7 feet, two for \$1.00, ten for \$4.00.

Black Russian Currant.

A variety brought by the writer from Russia in 1897-8 for the United States Department of Agriculture. Fruit of good size; plant has proven productive and hardy here when several varieties of Black Currants from England and Germany winter-killed. The Black Currant is popular in Europe but here it is one of our neglected fruits and should be given more attention as a fruit for culinary purposes. One year old plants, 4 for \$1.00.

Ural Willow.

An ornamental purple branched basket willow (*Salix Uralensis*) from the Ural Mountains, Siberia. Useful for basket work, and for a very low dense snow-catcher, but its main value here is for tying nursery stock, for which it is excellent, especially for small bundles. It was sent out spring 1906 with this description, but as it makes a dense dwarf hedge eight or ten feet in height of neat habit without pruning, or can be kept at any desired height by pruning, it now appears very promising as an ornamental hedge for the lawn. Cuttings 75 cents per 100; \$3.00 per 1000.

SOME NEW ALFALFAS



N. E. Hansen and party coming into Semipalatinsk, August, 1908, from a drive of 400 miles through the steppes of South-western Siberia.

In 1906 in the course of my third trip to Russia and second trip through Siberia as Agricultural Explorer for the United States Department of Agriculture, I learned that three species of alfalfa grew wild in Siberia, and brought seed of one of them to the United States for the first time. The

other two species were obtained on my third trip to Siberia in 1908-9. All three bear yellow flowers. My own estimate of these new alfalfas is that they will extend the alfalfa belt on this continent as far north as we wish to farm. Also that they will be needed mainly in regions where our common alfalfa, native of the mild region between India and the Mediterranean Sea, is subject to winter-killing. Russian experience shows that the yellow flowered *Medicago falcata* stands pasturing much better than the common alfalfa.

So far seed from the 1906 trip has not been available in sufficient quantity for the Experiment Stations, let alone the multitude of private planters eager to test them. My correspondence indicates the intense and widespread interest in the alfalfa question, but planters must be patient until the relative value can be determined and seed of the best ones can be raised for distribution.

In the work of propagating alfalfa plants by transplanting for the sub-stations at Highmore, Eureka and Cottonwood, a small surplus was raised which is now offered for the first time. The plants are all twice transplanted from flats and pots. They will be sold in bunches of twenty-five (25) with some of the inoculated soil in which they grew. Price, packed ready for shipment, 25 plants for \$2.50; 100 for \$8.00.

In South Dakota they will be sent only to those agreeing to enter into co-operation with the station in this alfalfa-testing work, in charge of Prof. C. Willis, Chief of the Agronomy Department of this station. Planters living outside the state must make the same agreement with me so that I may later report to the United States Department of Agriculture.

1. Words are usually retained in memory easier than figures, hence I have given the new alfalfas names instead of numbers.

2. These alfalfa plants should be planted three to four feet apart each way in good garden soil and given thorough cultivation. This will encourage the free production of seed.

3. Seeds will not be available in quantity until the legislature grants sufficient funds for the work at the central and sub-stations, preliminary to the work of farmers and seedsmen.

4. My preliminary report "The Wild Alfalfas and Clovers of Siberia, with a Perspective View of the Alfalfas of the World," was published May 28, 1909 as Bulletin 150, Bureau of Plant Industry, United States Department of Agriculture. A copy may be obtained by sending Money Order or Cash, ten cents, to the Superintendent of Documents, Government Printing Office, Washington, D. C.

The varieties offered this year are as follows: Three of the Sand Lucern (*Medicago media*) group; three of the yellow-flowered *Medicago falcata* of eastern Russia and Siberia; one of the yellow-flowered *Medicago ruthenica* of Eastern Siberia and Mongolia. They are named in their order going east around the world.

HANSEN'S NORTH SWEDEN ALFALFA.

This is my No. 51 of the 1906 trip. (Seed and plant introduction No. 20571). From twenty year old fields near Ultuna about sixty degrees north latitude Sweden. A Sand Lucern or hybrid alfalfa (*Medicago media*), a natural hybrid of the blue-flowered *M. sativa* and the yellow-flowered *M. falcata*, bearing yellow and blue flowers; plant of a vigorous upright habit, a heavy seeder here the past two years. Judging from its origin it will probably do best in moist cold regions and be resistant to cold rather than to drouth. The rainfall here has been above normal the past two seasons.

HANSEN'S COSSACK ALFALFA.

This is my No. 194 of my 1906 trip (S. P. I. No. 20714). A Sand Lucern (*Medicago media*), a hybrid alfalfa from the Voronezh or Voronezh province of the Don river region of Southeastern Russia. This spontaneous or natural hybrid of *M. falcata* and *M. sativa* will sometimes have blue flowers on one branch, yellow on another, sometimes both colors on the same branch; a heavy seeder here the past two years. This stock descended originally from a single plant growing wild and in my opinion this hybrid condition should be continued and the colors not isolated by selection as it appears to add extra vigor.

This province is in the black soil region where Indian corn, sugar beets and watermelons are raised.

HANSEN'S CHERNO ALFALFA.

This is my No. 196 of the 1906 trip (S. P. I. 20716). A Sand Lucern or hybrid alfalfa (*Medicago media*) descended originally from a single plant found wild on the steppes of the Voronezh province, Southeastern Russia, land of the Don Cossacks. The flowers are called black-green, but are really a very dark purple changing to a rich green with dark purple veins; plant of strong, very upright growth, a heavy seeder here the past two years. In my opinion this hybrid condition of the plant should be continued and the colors not isolated by selection.

Cherno refers to the dark-colored flowers, being the Russian word for "black."

HANSEN'S SAMARA ALFALFA.

This is my No. 201 of the 1906 trip (S. P. I. 20721); of tall erect growth with beautiful yellow flowers (*M. falcata*). From the dry steppes of Samara province in the Volga river region of eastern Russia. This may range further south than the Omsk and Obb Siberia strains, but should be found drouth-resistant and sufficiently hardy for South Dakota.

HANSEN'S OMSK SIBERIA ALFALFA.

This is my No. 199 of the 1906 trip (S. P. I. 20719) and is (*Medicago falcata*) descended from seed picked from wild plants near Omsk, Akmo-linsk province of Western Siberia late in the fall of 1906. The plants hold their own perfectly with other native plants in the compact prairie or steppe sod. Omsk is in latitude fifty-five degrees. A plant of vigorous habit with bright yellow flowers. The plant varies somewhat in erectness of habit so that there is room for improvement by selection.

HANSEN'S OBB SIBERIA ALFALFA.

This is *Medicago falcata* gathered in my 1908 trip (S. P. I. 24452) on the open steppes near Obb on the Obb or Obi river of the Tomsk province, central Siberia. In hardness and general characters it is much like the Omsk Siberia strain.

HANSEN'S GOBI DESERT ALFALFA.

This is *Medicago ruthenica* gathered in my 1908 trip, (S. P. I. 24451) from the Gobi desert of Northern Mongolia. It should be tried by experiment stations only until better known. Worthy of trial where the most extreme cold (when mercury freezes) comes during long periods in winter without any snow on the ground, and with very hot and dry summers.

Alfalfas for Experiment Stations Only.

A few plants can be spared for Experiment Stations only of several other strains of alfalfa from Siberia, including semi-erect and trailing forms which will be desirable for trial only on steep slopes and for pasturing. Plants twice transplanted in assortment at the same price. \$8.00 for 100.

STATEMENT

The object of these experiments in breeding hardy fruits, which are now second to none in extent, is to originate better and harder fruits for the prairie Northwest than any now known. To be compelled to protect fruit trees and plants is Horticulture on Crutches and hence to be avoided if possible.

This department does not conduct a commercial nursery. The plants sent out are either originated here as the results of fruit-breeding experiments, or imported from Russia, Siberia or other northern regions of Europe and Asia. My policy is to offer each kind only until well introduced, leaving the main work of propagation to the commercial nurseries. The varieties sent out have all done well here; their value elsewhere can only be determined by actual trial. A careful record is kept here of each lot sent out, and it is expected that each planter will do the same and report in due season when requested.

Those interested in experimental horticulture for the prairie Northwest should order early, as the stock is limited.

TERMS, CASH WITH ORDER.

Positively no credit given except to Government Experiment Stations. Add 25 cents to orders for less than \$3.00 to pay for moss and packing. 10 per cent discount on orders amounting to \$10 or over. Stock is shipped by express carefully packed in moss. No plants sold in less than the quantities specified.

No Orders Booked Until Paid For.

The money received from the sale of plants makes it possible to carry on the fruit-breeding work on a larger scale than would otherwise be possible. A work of tremendous magnitude and importance is being done with very limited means; this charge helps to cover cost of propagation and also serves to keep the stock out of the hands of the careless planter who is not really interested in the work.

Do not send local checks. Remit by Bank Draft, Postoffice or Express Money Order. Address

N. E. HANSEN,

January 31, 1910

Experiment Station, Brookings, South Dakota.